



# LETTERS OF INSTRUCTION FOR HOME-STUDIES

MINING ACADEMY OF FREIBERG

# FOR HOME-STUDIES

AT THE MINING ACADEMY OF FREIBERG

Edition Autumn 1958

DEUTSCHER VERLAG DER WISSENSCHAFTEN - BERLIN

#### Translated by Dr. Bachmann

The letters of instruction are based on the lectures of the Mining Academy. In addition to the presentation of the material they bring seminars (== practical exercises) with questions for repetition and exercises as well as the answers and solutions belonging to them. In this form they are especially qualified for self-study. In their totality they impart the knowledge that is expected of a graduated engineer of the mining and smelting branches. Beyond the circle of home-students the letters of instruction will also be of interest to the students of the Mining Academy, to technical high schools, and universities as well as to engineers at work.

Each letter of instruction contains about 64 pages and costs 2,— DM inasmuch as nothing else has been noted.

All the letters of instruction mentioned in this prospectus are written in the German language.

Interested persons outside the German Democratic Republic (Deutsche Demokratische Republik) can obtain them through any good bookshop. The booksellers are kindly asked to send their orders, with the noted order-number, to **Deutscher Buch-Export und Import**, Leipzig C 1

#### **MATHEMATICS - TECHNICAL MECHANICS**

Mathematics Technical Mechanics

Order-Number 10,007 / 1-18

PROF. DR. SCHMID - SCHONERSTEDT

#### Höhere Mathematik Higher Mathematics

In preparation 18 letters of instruction, of which 1–10 have been published (price of the 9th and the 10th letters 3,– DM each)

This series of letters of instruction treats, first of all, fully of numbers, variables, functions, and limiting values as foundation. Then follows an extensive presentation of the differential and integral calculus and their uses especially in differential geometry. The most important, too, about practical analysis and the calculation with complex numbers shall be dealt with. The series of letters will lead up to multiple integrals together with their applications and up to the fundamentals and the most important solution methods of common differential equations.

The solutions of the numerous exercises are fully given.

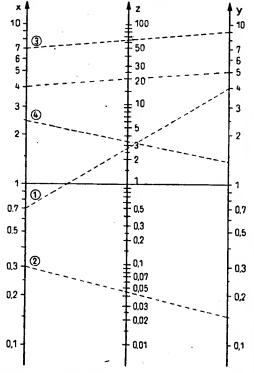
10,035 / 1-4
PROF. DR. SCHMID
DIPL.-MATH.
SCHONE
DR. HAENDEL

Order-Number

#### Graphisches Rechnen und Nomographie Graphical Calculation and Nomography

4 letters of instruction (complete)

The letters of instruction give guidance to the sketching of nomograms
which, by means of
numerous examples
and exercises, enable
the coming graduated
engineer not only to
use existing nomograms but to produce
any nomograms needed in his work.



This series of letters has also been published in one book, price 10,— DM Order-Number 10 035

Order-Number 10,032 / 1-4

PROF. DR. SCHMID - DR. ENZMANN

#### Analytische Geometrie Analytic Geometry

4 letters of instruction, of which 1-3 have been published

In the first part, the determinant calculation is preparatively dealt with. Then follows vector-algebra and its use in the analytic geometry of straight lines and planes in space. The analytical treatment of curves and surfaces of second order forms the main part, which is preceded by a greatly abridged summary of conic sections.

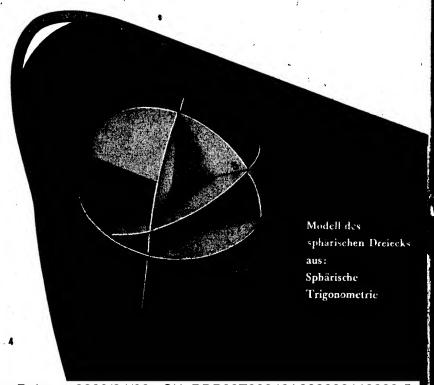
Order-Number 10,043 / 1-4

PROF. DR. SCHMID - DR. ENZMANN

# Darstellende Geometrie Descriptive Geometry

In preparation 4 letters of instruction, of which 1 and 2 have been published

The first number contains the fundamental elements of the twoplane projections besides a guidance to the axonometric sketching of forms bounded by planes.



Mathematics - Technical Mechanics

The second number brings, after the position and measuring problems, a detailed treatment of the ellipse.

The third number gives instruction in the drawing of topographical areas with the help of projections with plotting scales. The following number deals with the problem of the interpenetration of bodies and with the spiral surfaces. The conclusion gives a summary of the central projection and of the normal axonometry.

Order-Number 10,024 / 1-6

PROF. DR. SCHMID - DIPL.-MATH. BORSDORF

#### Sphärische Trigonometrie mit Anwendungen Spherical Trigonometry with its Uses

6 letters of instruction (complete; price of the 6th letter 4,— DM)
The series of letters of instruction-spherical trigonometry with its uses in mathematical geography, astronomy, and mining-treats in a clear and intelligible manner by means of many illustrations and exercises calculating and designing geometry on the sphere including its practical use in the working field of the miner, mine surveyor, surveying engineer, cartographer (drawings of maps!), mineralogist, etc.

The sixth letter deals with spherical astronomy using the "Nautisches Jahrbuch" in the new form, which was introduced in 1953. The application of modern methods and the special consideration of educational-didactic points of view qualify the letters of instruction not only for self-study, but also as text-book and exercise-book for spherical trigonometry in all kinds of schools. They thus fill up a gap; for there exists a striking deficiency of newer text-books in spherical trigonometry.

Order-Number 10,082 / 1-2

PROF. DR. SCHMID - DIPL.-MATH. BORSDORF

# Differential Geometrie in vektorieller Behandlung Differential Geometry in Vectorial Treatment

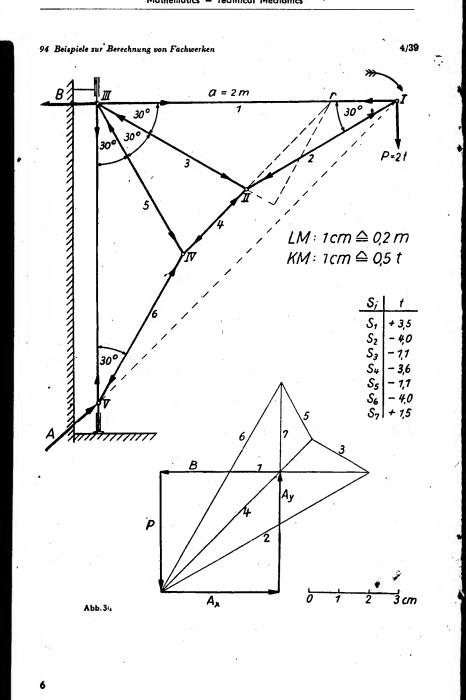
1st letter: Differential Geometry of Space Curves (has been published; price 2,50 DM)

2<sup>nd</sup> letter: Differential Geometry of Surfaces

The letters of instruction are to give in the shortest possible way the fundamental knowledge of differential geometry necessary for the young mine surveyor or professional surveyor. For that purpose the vector system has proved to be not only the shortest method, suitable to the object, but it will also, with didactically skilful treatment, most readily become clear to the scholar.

The first letter of instruction especially deals with the moving tripod and the formulas of Frenet. The second letter of instruction treats among others the parametric representation of a surface, the surface curves, and the fundamental forms of the theory of surfaces.

# Approved For Release 2009/04/30 : CIA-RDP80T00246A006600110002-5 Mathematics - Technical Mechanics



Mathematics - Technical Mechanics - Physics

DR. HAENDEL

Order-Number 10,033

#### Ubungen zur analytischen Geometrie der Ebene Exercises for the Analytic Geometry of the Plane

1 letter of instruction (complete)

The exercises for the analytic geometry of the plane serve as preparation for the series of letters of instruction «Analytic Geometry (of space)».

The letter of instruction follows the small text-book of Crantz-Hauptmann «Analytic Geometry of the Plane» (Teubner publishing house), but can also be used independently of it. The complete solutions of the exercises have been given because, according to experience, the giving of the results does not, for self-study, suffice to help to discover the own mistakes on self-checking.

The collection of exercises that is based on practical experiences of many years should also be a help to teachers of mathematics at technical and high schools.

Order-Number 10,022 / 1-12

PROF. DR.-ING. KNESCHKE - DR. TAUCHNITZ -DIPL.-ING. KXMMEL

#### Technische Mechanik für Bergbau, Hüttenwesen und verwandte Gebiete Technical Mechanics for Mining, Metallurgy, and Kindred Fields

12 letters of instruction (complete)

The series of letters of instruction comprises the fundamentals of statics and an abstract of the mechanics of material and of dynamics. At the same time the problems are treated graphically and analytically and deepened through correspondent examples.

At the end of the chapter about dynamics there is a short «Introduction into the Theory of Vibration», in which free, undamped, damped, and forced oscillations are dealt with.

#### **PHYSICS**

Order-Number 10,012 / 1-13

PROF. DR.-ING. LIEBOLD - DR. HAENDEL

### Physik Physics

13 letters of instruction (complete)

The first 12 letters of instruction give the contents of the lectures of two terms on experimental physics for all special branches. The 13th letter of instruction contains, as conclusion, a summary sketch about atomic physics as far as that is needed for the understanding of the questions raised in the foregoing letters of instruction, The series of letters of instruction is also being sold complete in a cardboard-box at the lump sum of 20,— DM.

**Physics** 

PROF. DR.-ING. LIEBOLD DR. HAENDEL

#### Mathemat. Ergänzungen zur Experimentalphysik Mathematical Supplements to Experimental Physics

1 letter of instruction (complete, price 2,50 DM)

This supplementary letter of instruction gives the contents of the additional lecture on physics which is given for particular branches at the Mining Academy. It is meant as a deepening and supplement to the subjects dealt with in the series of letters of instruction on physics. The arrangement of the separate chapters fits to that of the letters of instruction on physics.



Order-Number 10,067

Order-Number 10,017 / 1-3

PROF. DR. RICHTER - BRAUNE

#### Physikalische Übungen Physical Exercises

3 letters of instruction (complete)

The letters of instruction treat the problems that appear in the physical practices of the Mining Academy. The descriptions of the experiments are preceded by the theoretical fundamentals which are necessary for the comprehension of the experiments. The letters of instruction will also be of use to students who participate in physical practices at other universities.

Order-Number 10,031 / 1-2\*

PROF. DR.-ING. RICHTER - DR. HAENDEL

# **Strömungslehre,** ausgewählte Kapitel **Rheology** (a selection of chapters)

2 letters of instruction (complete)

The two letters of instruction contain selected chapters which are of special interest for the technical lines: dressing, gas, engineering as well as mining machines.

In the summary sketch are treated: the measuring of dust, the removal of dust, classifying, the loss of pressure in fillings, and the pneumatic conveying. The closing chapter contains the influence of

Physics - Chemistry

heat on flowing and internal friction. Numerous sources of information facilitate the expert's search for the original essays in periodicals.

Order-Number 10,063 / 1-3

PROF. DR.-ING. LIEBOLD - BRAUNE

#### Technische Schwingungslehre Technical Instruction in Vibration

3 letters of instruction (complete; the 3rd letter costs 3,- DM)

The letters of instruction treat the problems that appear during the technical uses of the theory of vibration and in free and forced vibrations. The investigations concern free and forced vibrations without and with damping, vibrations with one and several degrees of freedom, longitudinal, bending, and torsional oscillations of bars as well as the suppression of vibrations. The general problems are solved through examples out of constructional engineering, especially those of mining machines.

Chemistry

#### CHEMISTRY

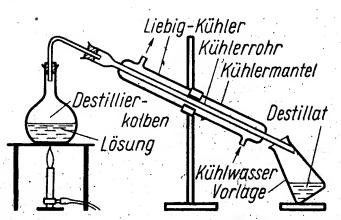
Order-Number 10,003 / 1-8

NATIONAL PRIZE WINNER PROF. DR. TECHN. HABIL. LISSNER – DR. KOCH

#### Anorganische Chemie Inorganic Chemistry

8 letters of instruction (complete)

The series of letters of instruction shows a systematical presentation of the inorganic world of matter and treats chemical elements and their most important compounds according to their connection with the individual groups of the periodic system of elements. Radioactivity and nuclear chemistry form the conclusion. The general laws and theories are dealt with at such points where particular cases lead to them. Through the demonstration of important technical methods in the extraction and use of inorganic substances, the student gets to know the multiple interactions between chemistry and his field of study.



Order-Number 10,010 / 1-8

NATIONAL PRIZE WINNER PROF. DR. TECHN. HABIL. LISSNER – DR. PHIL. KRUGER

#### Chemische Technologie Chemical Technology

8 letters of instruction (complete)

The series of letters of instruction treats:

- I. General chemical technology: Particular methods of the transport of material, the reducing to small pieces, union of substances, separation; pressure and high-pressure techniques, catalytic methods, methods of measurement, regulating methods, and test methods; a short summary of the materials of chemical technics.
- II. The most important natural raw materials, water and air, technical gases, liquefaction of gas and refrigeration, fuel and its refinement.
- III. Special chemical technology: Inorganic heavy chemicals, stlicate substances, corrosion and the chemical protection of the surfaces of metals, explosives and plastics.

Order-Number 10,023 / 1-3

PROF. DR. ING. HABIL. SCHRADER - DR. SCHÄFER - DIPL, ING. FROTSCHER

#### Anorganisch-chemisches Praktikum Inorganic-Chemical Practice

3 letters of instruction (complete; the price of the 3rd letter is 2,50 DM)

The first two letters treat of qualitative analysis. After a review of the practical work in the laboratory follow, in the preliminary tests and in the 180 separate experiments, the reactions which are typical for cations and anions. Original pictures of important micro-reactions illustrate the printed word. The thoroughly dis-

Chemistry

cussed qualitative separation process is, for a quicker commitment to memory, supplemented by tables. Finally, examples are given for the qualitative analysis of metallurgical products. The third letter gives a compilation of the classic processes of quantitative analysis.

Order-Number 10,014 / 1-8 PROF. DR. DIERICHS DR. SCHAFER LUDWIG

#### Organische Chemie Organic Chemistry

8 letters of instruction (complete)

The letters of instruction give a general summary of the forms of carbon compounds, their analytic examination and their production; at the same time the sphere of organic chemistry is dealt with in the usual order, supplemented by descriptions of experiments. Modern syntheses of plastics out of the coal production are specially noted. The uncertainties of modern chemistry are pointed out particularly.

Order-Number 10,034 / 1-9

PROF. DR. DIERICHS - LUDWIG

#### Chemie der Kohle Chemistry of Coal

9 letters of instruction (complete)

The series of letters of instruction points to the new scientific knowledge of the physical and chemical composition of coal as well as the evaluation and refinement of the manifold forms of appearance. Furthermore are illustrated the usual test methods for the marking and classification of the coal, by which — in connection with the working conditions — the standard qualities for



the production of materials in coal refining are ascertained in the laboratory. Through comparing inspection of the different methods of testing, the internal connections between the particular qualities of the individual coals during coking, combustion, and gasification are dealt with.

The last letter of instruction explains the special technology of carbon.

Order-Number 10,060 / 1-7

PROF. DR. DIERICHS - LUDWIG

#### Teer- und Erdölverarbeitung The Working-up of Tar and Mineral Oils

7 letters of instruction (complete; the sixth letter costs 2,50 DM)

The series of letters of instruction deals, in complete and thorough description, with high-temperature coal tars and browncoal low-temperature tars, as well as with mineral oils according to origin, occurence, extraction, qualities, and working-up by means of the different physical-chemical methods into important finished products; the importance of the individual tar and mineral oil products for industry and economy is pointed out especially. In the introduction, the theoretical and practical foundations of the various methods of the physical working-up are explained, as well as what is needed for the chemical changes and refining of tars and mineral oils and the refining after-treatment of the finished products.

Order-Number 10,038 / 1-3

PROF. DR. DIERICHS, DIPL-CHEM. KUNZELMANN - LUDWIG

#### Organisch-chemisch-technologisches Praktikum Organic-Chemical Technological Practice

3 letters of instruction (complete)

This series of letters of instruction deals with the most important methods of testing for solid fuel, hydrocarbonaceous oils (power fuel and lubricants), and gases with laboratory apparatuses paying attention to the operating methods and the DIN regulations (DIN — German Industrial Standardization).

Furthermore, the reader is given, beside a full description of analytics, the most important information about the qualities of the substances to be tested, their behaviour in action and the quality demanded of them.

These letters serve not only as instructions for practice to the students at the Mining Academy, but they also give practical indications of tests to engineers and professional experts.

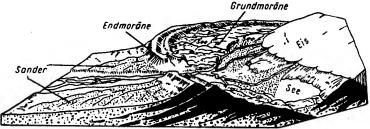
#### **GEOLOGY**

Order-Number 10,020 / 1-9

PROF. DR. SCHWANECKE, PROF. DR. SC. NAT. HABIL HUNGER, DR. VIETE and DR. WAGENBRETH - DR. REICHERT

#### Allgemeine Geologie General Geology

In preparation 9 letters of instruction, of which 1-8 have come out; the price of the 5<sup>th</sup> and the 6<sup>th</sup> letters is 3,— DM each, the 8<sup>th</sup> letter costs 4,— DM



Starting from the astronomical-geophysical foundations there are dealt with: the magmatic rocks in mineralogical and petrographical respects and their stratification, weathering and soil, deposition and sedimentation, biogen rock formation, forms of strata and dislocations of rocks, movements of the earth's crust and metamorphism.

Order-Number 10,053 / 1-8

PROF. DR. SCHWANECKE - DR. THIERBACH

#### Historische Geologie Historical Geology

In preparation 8 letters of instruction, the 1st letter has come out The series of letters of instruction gives, for miners and mine surveyors, an introduction into the wide field of stratigraphy. After a summary of the zone fossils and a treatment of regional stratigraphy, the distribution of land and water as well as climatic and tectonic conditions are described for the single formations.

For a better understanding there are included a great many map drawings, profile-sketches, tables, and selected illustrations.

Order-Number 10,001 / 1-6

PROF. DR. SCHWANECKE and PROF. DR. SC. NAT. HABIL. HUNGER -- DR. REICHERT

#### Einführung in die Paläontologie Introduction into Paleontology

6 letters of instruction (complete; 2nd edition)

The introductory letter deals with the development of geologic problems and knowledge, of the development of fossilization and the evaluation of the fossil remains for science.

**∕Geology** 

In the second till fourth letters of instruction are described in the order of the natural system particularly the marine invertebrate animals, which are important for historical geology, together with a selection of vertebrata and a chapter on remains of life.

The fifth and sixth letters describe the flora of the continent, as far as it characterizes a few selected epochs. Copious, well-chosen illustrations, summaries, and a complete index facilitate the use of the series of letters of instruction.

DR. THIERBACH and DR. REICHERT

Order-Number 10,001 / 7

#### Kleines paläontologisches Wörterbuch Small Paleontological Dictionary

It serves as a supplement to the "Introduction into Paleontology". More than a thousand technical terms and fossil names are explained and linguistically derived. The small dictionary unburdens the memory and increases the pleasure of studying paleontology.

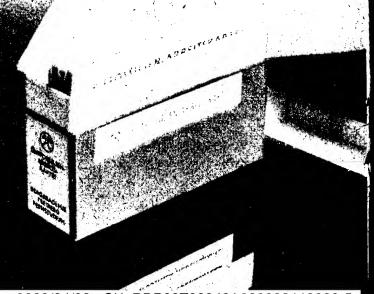
DR. THIERBACH and DR. REICHERT

Order-Number 10,016 / 1

#### Leitfossilien-Arbeitskartei Card-Index for Determination Fossils

In handy cardboard, size DIN A 6, price 4,- DM

This card-index gives the extract out of the letters of instruction «Introduction into Paleontology» 2 to 4. Only animal fossils are illustrated, whereby living and burial places, typical characteristics, places of discovery, stratigraphic classification of the species in question, and the temporal appearance of the genera are pointed out. Blank maps allow a further engineer of fossils. This cardindex shows at the same time the importance of the index system to stratific work.



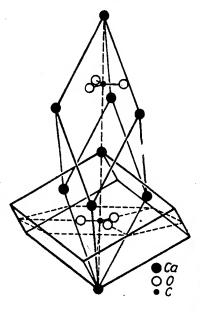
#### MINERALOGY

DR. PHIL. NAT. HABIL. LEUTWEIN DR. SOMMER-KULASZEWSKI

#### Allgemeine Mineralogie General Mineralogy

10 letters of instruction (complete) «General Mineralogy» deals with the most important in crystal morphology, microstructure, and X-ray technique, chemical mineralogy, physical and optical cristallography. The letters of instruction give the necessary equipment not only to the future mining engineer, metallurgist, and mine surveyor, but also to mineralogists, geologists, chemists, physicists, and metallographers, who can also improve their knowledge with them.

Order-Number 10,004 / 1-10



Mineralogy

Order-Number 10,025 /1-8

DR. PHIL. NAT. HABIL. LEUTWEIN DR. SOMMER-KULASZEWSKI

#### Spezielle Mineralogie Special Mineralogy

In preparation 8 letters of instruction, of which 1-3 have been published In the first letter of instruction the mineralization and paragenesis are dealt with. The following letters of instruction deal with the separate minerals: firstly the elements, then the sulphides, oxides, oxysalts, and the large group of silicates.

#### Kristalmodellnetze Crystal-Modell Nets

Order-Number 10,011 / 1

60 model-sheets for pasting the most important forms of crystals price 5,— DM

Each of the 60 sheets, size DIN A 4, contains the net of a crystal model and its pictured sketch. The enclosure gives a short general introduction into the construction of a crystal-model net.

Mineralogy



#### 32 Kristallklassen The 32 Classes of Crystals

Order-Number 10,011 / 2

12 tables for self-study

These tables give in 224 illustrations an insight into the variety of the simple forms of crystals and a distinct survey of the nomenclature of the 32 classes of crystals. The other tables with the stereographic projections of crystal forms help to facilitate their understanding.

Order-Number 10,015 / 1-5

PROF. DR. - ING. HABIL OELSNER - DR. PHIL HABIL KRUGER

#### Lagerstätten der Steine und Erden The Deposits of Non-Metallic Minerals

5 letters of instruction (complete)

The series of letters of instruction treats of the deposits of mineral raw materials of the chemical prime industry, the glass-industry, and ceramics, of fire-proof minerals, mineral fertilizers, grinding and polishing minerals, of mineral pigments, and of rocks which are used in the building trade.

This series has also been published in one book, price 10,— DM

Order-Number 10,015

Order-Number 10,049 / 1-8

PROF. DR.-ING. HABIL OELSNER - DR. PHIL HABIL KRUGER

#### Erzlagerstätten Ore Deposits

In preparation 8 letters of instruction, of which 1 and 2 have been published (price of the 1st and 2nd letters 3,— DM each)

This series of letters deals in detail with the whole range of general and special science of ore deposits. Starting from the general laws of the formation of deposits, the magmatic, sedimentary, metamorphic, and mobilized deposits are discussed in genetic order. As far as some provinces of deposits have become sufficiently known, a "regional-genetic" systematic order will be applied, that is to say, the deposits belonging to a geological complex (e. g. Saxon Erzgebirge = Ore Range, the Hartz Mountains), are being treated together and their mutual dependencies displayed.

Order-Number 10,040 / 1-3

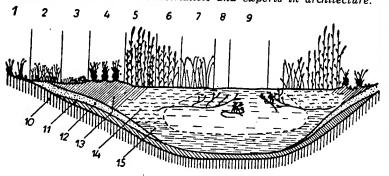
DR. PHIL. NAT. HABIL. LEUTWEIN - DR. PHIL. HABIL. KRUGER

#### Bodenkunde Study of the Soil

3 letters of instruction (complete; the price of the 3rd letter is 2,50 DM)

The first part of the series of letters of instruction, "The General Study of the Soil", deals with the ground-forming factors. In the second part, "The Special Study of the Soil", the types of ground, the characterizing of the ground, and the damages due to mining operations are described. The third part gives a description of the soils of Germany with the help of Stremme's ground-map.

The series of letters of instruction will be of use not only to geologists, mineralogists, and geochemists, but also to farmers and foresters as well as to industrialists and experts in architecture.



Order-Number 10,026 / 1

DR. PHIL, NAT. HABIL. LEUTWEIN - DIPL.-ING. EDELMANN DR. PHIL. HABIL. KRUGER

#### Allgemeine Lötrohrprobierkunde General Blowpipe Analysis

1 letter of instruction (complete)

The student will be acquainted with the implements and the technique of blowpipe analysis. In well over 100 experiments he practises the work on charcoal, in the flask, in a glass tube closed at one end and becomes acquainted with the fusibility of the specimens, the colouring of the flames, the behaviour in the borax and microcosmic salt, with soda, cobalt-solution, and potassium hydrosulphate.

The experiments have been so chosen that, after their carrying-out, the student will possess a realizable dexterity in the determination of minerals and will have enlarged his mineralogical knowledge.

Order-Number 10,062 / 1-4

DR, PHIL. NAT. HABIL. LEUTWEIN – DIPL.-ING. EDELMANN

#### Spezielle Lötrohrprobierkunde Special Blowpipe Analysis

In preparation 4 letters of instruction, of which 1 and 2 have been published; the price of the 2<sup>nd</sup> letter is 2,50 DM

In the first letter is shown how a qualitative analysis of this dealt with group I, the alkali, alkaline earth, and metallic salts, is to be carried out. Through 55 characteristic and fully explained examples the student is shown what he has to pay attention to and how he finally comes to the perception and conclusion that the examined substance, that was at first quite unknown to him, can only be the mineral that is named at the end of the test.

In the following letters of instruction are dealt with, in a few detailed examples, the following groups: II metallic oxides, III silicates and aluminates, IV sulphurets and arsenic compounds, selenic and telluric compounds and V metal alloys which do not contain any arsenic nor sulphur, or which contain only traces of them.

#### **PLASTICS**

DIPL.-ING. BECKERT

Order-Number 10,058 / 1-3

#### Kleine Werkstoffkunde A Short Study of Materials

In preparation 3 letters of instruction, of which 1 and 2 have come out This series of letters of instruction treats the properties of the metallic materials and their examination. The elements of the art of alloying, of heat treatment, deformation, and material testing of metals are presented in a simple way. Proceedings depending on the material as welding and soldering are discussed in detail, especially with a view to repair work. A short view of the properties and tests of the non-ferrous materials as far as they are of greater importance for mining forms the conclusion.

#### ELECTROTECHNICS

Order-Number 10,006 / 1-4

PROF. DR.-ING. HABIL WRANA - HIRTH

#### Grundlagen der Elektrotechnik The Fundamentals of Electrotechnics

4 letters of instruction (complete)

The series of letters of instruction gives a draught of the theory of direct current (D. C.) with special accent on the conception of energy and performance, an explanation of the technical customary magnetic units of measurement and their use in the calculation of magnetic circles as well as an introduction into the fundamentals of the alternating current (A. C.) techniques (including rotary current and transformers). Starting and fading actions of variable currents with D. C. circuits are also dealt with.

To illustrate currents and voltages in the A. C. part the vector diagrams generally used in practice are shown, the origin of which is explained in detail.

PROF. DR.-ING. KNOOPS - BRAUNE

Order-Number 10.039

#### Elektrizitätswirtschaft Electro-Economics

1 letter of instruction (complete)

First of all this letter of instruction gives a short account of the natural sources of energy we dispose of and of the most important characteristic data which have been put up as a pattern for the solving of electro-economical problems. In the principal parts the generation of electricity, the transport of electrical energy, the power-factor as well as the fixing of electrical tariffs are dealt with. The letter of instruction concludes with some indications of the importance of electro-economics for the running of electrical devices in mining.

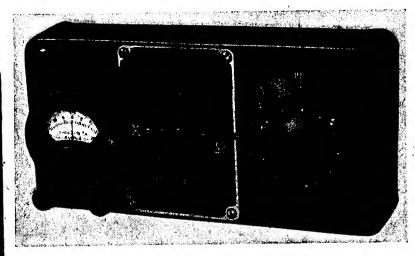
Plastics Electrotechnics Science of Mining

Order-Number 10,042 / 1-2

PROF. DR.-ING. HABIL. WRANA - HIRTH

#### Elektrische Meßtechnik Electrical Technique of Measuring

In preparation 2 letters of instruction, of which the first has come out After definitions of the technique of measuring and after the explanation of the symbols of measuring instruments, the first letter of instruction treats of the usual measuring devices and their employment in current, voltage, and resistance measuring, further the use of shunt resistances and resistors as well as measuring instrument transformers for the measuring of current and voltage. Various methods of the determination of ohmic resistances, inductive and capacity resistances are discussed and special measuring instruments for insulation and earthing resistances are described. Determinations of disturbances are shown by means of resistance and capacity measuring, whereby the necessary measuring device is explained.



#### SCIENCE OF MINING

The revised series of the "Art of Mining" will no more appear in the now existing complete form, but will be disparted into the single fields of science of mining and published subsequently.

PROF. DR.-ING. MAY

Order-Number 10,002 / 1,2

#### Tiefbohren für Bergleute Deep-Boring for Miners

2 letters of instruction of which the first letter has come out

Science of Mining

Order-Number 10,002 / 3-5

PROF. DR.-ING. SPACKELER - PROF. DR.-ING. MAY

Bergbaukunde (3 bis 5)/ Gewinnung

Science of Mining (3 to 5)/Extraction
3 letters of instruction

Order-Number 10,002 / 6

Bergbaukunde (6)/Aus- und Vorrichtung Science of Mining (6)/Opening-out and Preparatory Work

1 letter of instruction

Order-Number 10,002 / 7

Bergbaukunde (7)/Gebirgsverhalten bei bergmännischer Einwirkung Science of Mining (7)/Rock Properties Due to Mining Operations

1 letter of instruction

Order-Number 10,002 / 8-9

Bergbaukunde (8 und 9)/Abbaumethoden Science of Mining (8 and 9)/Mining Methods

2 letters of instruction

PROF. DR.-ING. MAY

Order-Number 10,002 / 10

Bergbaukunde (10)/Bergeversatz Science of Mining (10)/Packing

1 letter of instruction

Order-Number 10,002 / 11 to 15

PROF. DR. ING. GIMM - PROF. DR. ING. MAY -

Bergbaukunde (11 bis 15)/Wetterlehre Science of Mining (11 to 15)/Ventilation

In preparation 5 letters of instruction, of which 4 letters have been published

These letters of instruction, clearly arranged and supplied with many pictures as illustrations, deal with the whole field of the science of mining. They represent a modern science of mining, suitable also for students of other mining academies, for the teachers of mining schools as well as for the chief mining officers in administration and in practical work.

Order-Number 10,077 / 1-6

PROF. DR.-ING. SCHUBERT - DIPL.-ING. SEYRICH

#### Grubenförderung Haulage

In preparation 6 letters of instruction, of which the first has been published

After an introduction are first treated the winding gear und hauling methods basing only upon the effect of gravity (drawing-out by box holes, shoots, and hauling with fixed chutes), then the jigger

Science of Mining

conveyors and belt- and chain conveyors. After this, car haulage is discussed. Before the treatment of shaft hoisting a chapter on mechanical treatment of loose rock and ore (loading devices and loading machines) is put in.

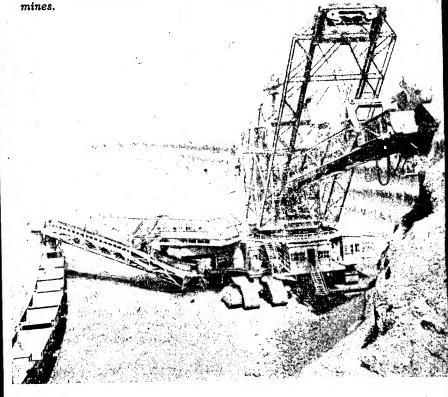
Order-Number 10,079 / 1, 2

PROF. DR.-ING. MATSCHAK - DIPL.-ING. TROPSCHUG

#### Bergmännische Wasserwirtschaft in Tiefbaugruben Drainage of Underground Mines

In preparation 2 letters of instruction, of which the first has been published

The letters of instruction deal with the forms in which water appears above and below the surface of the earth and their natural relations, the appearance of waters in mines, the keeping away of water from the pits, the systematic draining of the underground workings, the arrangements and installations for raising the waters flowing in the underground workings up to a discharge. The systematic preliminary dewatering, which belongs to the opening-up in brown-coal mining, is dealt with in the "Science of Brown Coal Open Cut Mining". Hydrology is treated only as far as it nis necessary for the understanding of the dewatering of



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Science of Mining - Mine Surveying

PROF. DR.-ING. MAY

Order-Number 10,071 /1-3

#### Schachtabteufen Sinking of Shafts

In preparation 3 letters, of which 1 and 2 have appeared

The 1st letter of instruction deals with normal shafting by hand. Introductorily are treated the site of a shaft, surface installations, and briefly the different sinking processes. Mechanic loading by means of grabs is dealt with in detail in the chapter of work at the bottom of the pit.

Further chapters discuss riding, water drainage, ventilation, and lighting. After a discussion about the deepening of mainshafts follows the organization of work for shaft sinking. The last letter is provided for shaft lining and special methods of sinking. The reading is deepened by so-called «seminars» (practical exercises).

Order-Number 10,036 / 1-18

PROF. DR.-ING. HARTIG - DIPL.-BERGING. GRESSMANN

#### Braunkohlen-Tagebaukunde The Art of Brown Coal Open Cut Mining

In preparation 18 letters of instruction, of which 1–9 have been published (the price of the  $7^{th}$  and the  $8^{th}$  letters is 3,— DM each; the  $9^{th}$  letter costs 2,50 DM)

The series of letters of instruction begins with an introductory study of the plan of operations, then it deals with the implements in the open cut mining, then the regular work, the draining whilst the mines are at work and the water raising, fire-fighting, the working in winter, the surface installations, and the up-keep works. Finally a planning example is to be calculated and an outlook on the future development of the brown coal open cut mines is to be given.

#### MINE SURVEYING

Order-Number 10,008 / 1-9

PROF. DR.-ING. HABIL NEUBERT and PROF. DR.-ING. EH. LUDEMANN — DIPL.-ING. SCHONE — MINE SURVEYOR EHRHARDT

#### Markscheidekunde und Geodäsie The Art of Surveying Mines and Geodesy

In preparation 9 letters of instruction, of which 1-4 have been published (the fourth letter costs 2,50 DM)

The letters of instruction of this series deal with the fundamentals of the art of surveying mines and geodesy also for the mining

Mine Surveying

engineer. The reader is taught linear measurements, survey plans with simple instruments beside calculations of area and mass. Then follow letters of instruction about polygon-measurements, altimetry, and tachymetry. These fundamentals are closed with essays on triangulation and measurements of orientation as well as magnetic measurements. At the same time is also treated the fundamental knowledge of the necessary instruments.

Order-Number 10,080 / 1-12

PROF. DR. - ING. HABIL. NEUBERT

#### Spezielle Markscheidekunde und Geodäsie Special Art of Surveying Mines and Geodesy

In preparation 12 letters of instruction, of which the first will appear in December 1958

This series of letters which is particulary intended for the surveyor of mines deepens the subjects treated in the series of letters of instruction entitled "The Art of Surveying Mines and Geodesy", namely linear measurements, triangulation, measurements of orientation, polygoniometry, altimetry, and magnetic measurements. While the first letters of instruction deal in detail with direct and indirect linear measurements, the following will treat the different methods of mine orientation from shaft sounding to gyroscopic measuring. Moreover this series of letters deals with the point of intersection, high-precision levelling operations, geodesy and the coordinate systems as well as with operating problems being of interest to the mine surveyor.

Order-Number 10,045 / 1-4

PROF. DR.-ING. HABIL. NEUBERT - DIPL.-ING. SCHLICKE - MINE SURVEYOR EHRHARDT

## Markscheiderisch-geodätische Geräte und Instrumente Mine Surveying-Geodetic Tools and Instruments

In preparation 4 letters of instruction, of which the first has been published

The letters of instruction of this series shall give a survey of the instruments and tools used in surveying mines. After dealing with the most important and, for the majority of measuring instruments, mostly used devices follows, explained by means of many pictures and completed by historical notes and the description of the most important stages of development, a survey of the type, purpose, regulation, and mode of action of the now employed tools and instruments. Details of the instruments and their errors are not mentioned in order to preserve the appropriate descriptive character of these letters of instruction. They are reserved for a later series of letters of instruction: "The Science of Instruments".

Mine Surveying

Order-Number 10,018 / 1-8

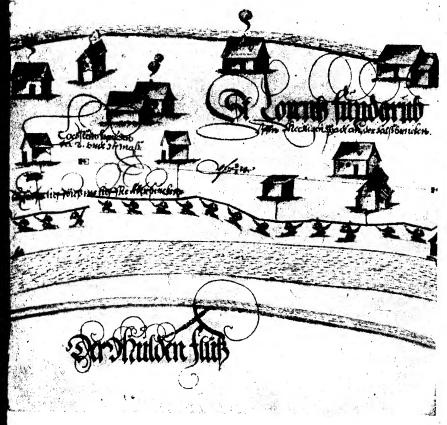
PROF. DR.-ING. HABIL. NEUBERT - DIPL.-ING. STEIN

#### Plan- und Rißkunde

#### The Science of Plan-Drawing and Sketching

8 letters of instruction (complete; the price of the 2<sup>nd</sup> letter, inclusive its portfolio with illustrations, is 6,- DM; of the fifth 5,- DM; of the sixth 3,- DM; of the seventh 4,50 DM)

The series of letters of instruction begins with a historical retrospect of the mining surveying technics and the gradual formation of maps of mines. Then are treated: the individual forms (horizontal projection and vertical section etc.), drawing materials, drawing auxiliary means, documents for the construction of plans, construction of the plans, official maps, standards, and the use of the book on mine plans for diverse purposes. For letter 1 note the portfolio «Five Historical Mine Plans».



Order-Number 10,018 / 1a

#### Fünf historische Grubenrisse Five Historical Mine Plans

In an art-paper portfolio (DIN A 3) from original plans, price 7,— DM The five historical mine plans give, with examples from the mining industry near Freiberg, a good insight into the development of mine plans during the 16th and 17th centuries. They show the difficulties against which the first plans had to struggle and the attempts to overcome them. In the multiplicity of the represented objects the plans are, not only for the expert, a supplement to the series of letters of instruction «The Science of Plan-Drawing and Sketching», but they are also in themselves alone a valuable stimulus for anyone interested in mining and they represent a valuable social document. A special edition of unfolded copies for exhibitions or as object-lessons may be had at the same price.

# TECHNICAL UTILIZATION OF FUEL AND THERMOLOGY

Order-Number 10,013 / 1-12

NATIONAL PRIZE WINNER and PROMINENT
NATIONAL SCIENTIST
PROF. DR.-ING. EH. KEGEL
and NATIONAL PRIZE WINNER PROF. DR.-ING. RAMMLER

#### Brikettieren für Bergleute und Aufbereiter Briquetting for Miners and Dressers

In preparation 12 letters of instruction, of which 1-10 have come out (the 1st letter costs 2,50 DM; the 9th letter costs 3,- DM)

The series of letters of instruction deals preponderantly with the briquetting of soft brown coal (briquetting without binding agent). It begins with the bunkering of raw coal and leads up to the finished briquette, utilizing the latest knowledge. The briquetting of pit coal with binding agents is also dealt with.

Order-Number 10,065 / 1-5

NATIONAL PRIZE WINNER PROF. DR.-ING. RAMMLER — BRAUNE

# Verbrennungs- und Vergasungslehre Combustion and Gasification

In preparation 5 letters of instruction, of which 1-4 have come out (the 2<sup>nd</sup> letter costs 3,- DM; the 3<sup>rd</sup> letter costs 2,50 DM)

The series of letters of instruction will probably consist of five letters of instruction. In the first part the solid, fluid, and gaseous fuels are dealt with, their composition on account of elementary analysis, the heating values, the classifying of fuels according to their suitability for the various intended purposes, the problem of sorts, and the importance of the ballast substances. The theory of combustion contains the calculation of combustion and its importance for the economy of the firing plants. In this part are especially taken into consideration the calculation of the air required and of the quantity of the combustion gas, the composition of the combustion gases, the calculation of losses as well as the computing of the temperature of combustion by means of calculation and diagrams. The theory of gasification deals with the equilibrium constants and their importance for gasification, the basic equations of gasification, the influence of the gasifying agent on the type of the formed gases of gasification, the composition of gas, the characteristic performance data which are decisive for gasification, the balance sheet of materials and heat balance and the losses.

Technical Utilization of Fuel and Thermology

Order-Number 10,064 / 1-8

PROF. DR.-ING. BECHER

#### Gasverteilungstechnik Gas Distributing Technique

8 letters of instruction, of which 1—7 have appeared, the eighth letter will appear in November 1958 (the price of the 2nd, 3rd and 6th letters is 2,50 DM each; the 8th letter costs 3,— DM)

This series of letters of instruction consists of 8 letters. It gives an introduction into the special tasks which exist in the supplying of gas to the consumers. Special stress is laid on the problems of long-distance gas supply.

Order-Number 10,078 / 1-3

PROF. DR.-ING. BECHER

# Technologie industrieller und gewerblicher Produktionsprozesse Technology of Industrial and Professional Production Methods

3 letters of instruction; the 1st and 2nd will appear in September, the 3rd in November 1958. The books have resulted as enlargements of a lecture given at the Mining Academy of Freiberg for students of gas engineering. They allow the engineer a first insight into the most important processes of production and are to enable him to do work as a consulting engineer as to the best use of energy.

1st letter: The Most Important Branches of Metal Working (9,— DM)
2nd letter: The Treatment of Non-Metallic Material (8,— DM)
3rd letter: Provision-Industry and Medical Technique (7,— DM)

Order-Number 10,028 / 1-8

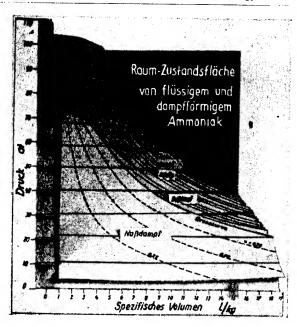
PROF. DR.-ING. CHRISTIAN

#### Technische Wärmelehre Technical Thermology

In preparation 8 letters of instruction, of which 1—7 have come out; the 8th is to be published in December 1958

The series of letters of instruction comprises general thermodynamics — without the special power and working processes, which are reserved for the series of letters of instruction «Power Engines and Machines» —, heat transfer, and combustion. In consequence of the clear and intelligible representation of the subject, it is not only suitable for the students of the Mining Academy but also for those studying at technical schools for engineers.

Technical Utilization of Feul and Thermology



Order-Number 10,046

PROF. DR.-ING. HABIL. KNOOPS - BRAUNE

#### Elektrowärme Electrothermics

1 letter of instruction, price 3,- DM (complete)

The letter of instruction gives a general view of the different types of electric furnaces (resistance furnaces, electric arc furnaces, induction furnaces, infrared radiators), their development, their intended uses, and their importance for public electricity supply.

#### METALLURGY

Order-Number 10,009 / 1-14

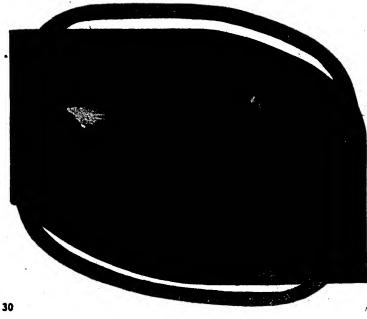
PROF. DIEPSCHLAG † -- PROF. DR.-ING. HABIL. POCHWISNEW PROF. DR.-ING. RICHTER-MEINHOLD -- DIPL.-ING. v. STRUVE

# Eisenhüttenkunde I/Roheisenerzeugung Ferrous Metallurgy I/Pig-Iron Production

14 letters of instruction (complete; the 14th letter costs 1,- DM)

Since over a quarter of a century the German metallurgical engineer for iron and steel and, above all, the student have been waiting for the appearance of a book on ferrous metallurgy, which would give the latest stage of the technique in iron works which has been so quickly developed in recent times. The commenced series of letters of instruction "Ferrous Metallurgy I / Pig-Iron Production" and "Ferrous Metallurgy II / Steel Manufacture" shall supply this want. The series I deals in detail with all fields of the blast furnace man.

Starting from coking the student is led to the blast furnace and to its burden. The sintering, the preparatory and dressing labours are — on account of the necessity of smelting poor ores, too, — likewise fully described just as the blast-furnace products pig-iron, slag, and gas. Electric blast-furnaces and pit-furnaces as well as the casting of pig-iron and the mixing are, in consideration of the most modern methods, exhaustively dealt with.



Order-Number 10,068 / 1-12

PROF. DR.-ING, KUNTSCHER - PROF. DR.-ING. RICHTER-MEINHOLD -OBERING, DIPL.-ING. MORAWA

#### Eisenhüttenkunde II / Stahlerzeugung Ferrous Metallurgy II / Steel Manufacture

In preparation 12 letters of instruction, of which 1 and 2 have been published

After a short historical summary, the older processes of steel manufacture (bloomery fire, puddling process) are dealt with first, then in detail the purifying process (Bessemer and Thomas process). Then follows the manufacture of steel in the open-hearth furnace, which ends with the process of the production of electric steel. The series of letters of instruction lays special stress on modern methods like, for instance, the duplex process, oxygen metallurgy, etc., and concludes with powder metallurgy and ferroalloys.

Order-Number 10,075 / 1-6

PROF. DIPL - ING. LANGE - DIPL - ING. TAPPE

#### Allgemeine Metallhüttenkunde General Non-Ferrous Metallurgy

In preparation 6 letters of instruction, of which the first letter has come out (price 2,50 DM)

This series of letters goes briefly into the history of metals, their characteristics, and the elements being important to the metallurgist; moreover it deals with ore traffic. Definitions of thermal chemistry are explained, and necessary details about fuels and the different kinds of furnaces are treated. Then follow lectures on the chemico-physical fundamentals of smelting processes (mixing, crushing), on reduction and oxidation as well as on hydrometallurgy. A survey of the most important methods of extraction is given. The following chapters deal with metal losses, flue-dust and its separation, waste gases and their utilization, intermediate products, slags, and the metals and their salts.

Order-Number 10,005 / 1, 2

PROF. DR. HAASE

#### Feuerfeste Baustoffe Refractory Materials

2 letters of instruction (complete)

The two letters of instruction about refractory materials discuss in abridged systematical form the general qualities of refractory materials. In spite of their brevity the subjects are carefully

Metallurgy

explained. The special part deals with the refractory silicates (e. g. chamotte), the silica and magnesite bricks, the highly refractory oxides and leads finally to the highly refractory special materials on a carbon and carbide basis and to the fireproof metals that, for instance, play a part in electrical high-temperature furnaces.

The series of letters has been published in one book (price 6,50 DM)
Order-Number 10,005

Order-Number 10,027

PROF. DR. HAASE - DIPL.-ING. FROTSCHER

#### Technologie des Emails The Technology of Enamel

1 letter of instruction, price 3,- DM (complete)

The first part of the technology of enamel shows through the qualities that enamel is a material that stands between glass and ceramics.

The second part gives a compilation of the raw materials which are used for the different kinds of enamel.

The third part initiates into the fusing of enamel and the enamelling of sheet metal and cast-iron. Good pictures enliven this practical part.

Order-Number 10,066

DR.-ING. BEYERSDORFER

# Glashüttenkunde The Science of Glass-Works

The 4 letters of instruction have come out in one book; price 9,- DM

The \*Science of Glass-Works\* treats, according to the present stage of scientific knowledge and technique and after a short study of the history of glass, the theoretical knowledge of glass (structure, state of the glass), auxiliary means of glass-technique, such as gas-producers, melting furnaces, and auxiliary furnaces, the raw materials for glass, the production of glass (mixture, fusing, the shaping process by hand and machine, the different types of machines), the cooling of glass, strain and double refraction properties of the glasses, such as mechanical, acoustic, thermal, optical, electrical, and chemical properties, glass defects; opaque glasses and colour-glasses; the further working-up of glass and its refining and finally glass-fibres. — The whole is illustrated by 98 pictures.

#### INDUSTRIAL ACCOUNTANCY

DR. GALLENMÜLLER

Order-Number 10,076 / 1-5

# Industrielles Rechnungswesen Industrial Accountancy

5 letters of instruction (complete; the 4th letter costs 2,50 DM; the 5th letter inclusive portfolio costs 4,- DM)

After a brief discussion of the structure of industrial accountancy follows a survey of book-keeping by double entry. The relations between the different classes of accounts form the end of the first letter. The 2nd and 3rd letters deal with the problems of economy and organisation of the fundamental accounts. In the same way are treated in the 4th letter the economic problems (definition, structure, delimitation) of the accounts of costs, followed by practical examples of the balancing of accounts of a brown-coal mine and a metallurgical plant. The 5th letter brings a report of the finances, the settling of accounts for a brief period, and the position of the first book-keeper. A portfolio is attached which contains all the forms and statements resulting from the subject matters of the 4th and 5th letters.

#### THE SCIENCE OF LAW

PROF. DR. JUR. EBERT

Order-Number 10,069 / 1-2

#### Bergrecht Mining-Laws

In preparation 2 letters of instruction, the first of which has been published

The series of letters of instruction deals, first of all, with the ideas, principles, history, and sources of mining-laws, then those concerned with the mining-laws and the individual actual facts of the mining-laws in their legal effects.

Order-Number 10,070

Industrial
Accountancy
The Science of Law

# Bergrecht / Gesetzessammlung Collection of Mining-Laws

1 volume (600 p., complete; price 18,- DM)

This volume contains the present valid regulations of mining-laws and completes the series of letters of instruction «Mining-Laws».

# LANGUAGES THE RUSSIAN LANGUAGE

Order-Number 10,029 / 1-6

PETZSCHNER and LENK

#### Russisch Russian

6 letters of instruction (complete) and

Order-Number 10,029/7

Wörterverzeichnis zu den Lehrbriefen 1 bis 6 a dictionary for the letters of instruction 1 to 6

Every lesson of the grammatical course of instruction gives texts in connection with mining, metallurgy, dressing, mine-surveying, and geology. What is new is that, starting from the first lesson, the student, with regard to the vocabulary, remains in his technical sphere. After the study of the six letters of instruction and a (separately announced) booklet with technical texts, he will be able to understand the Russian literature of his special field. Not only the students of the Mining Academy and those matriculated studying at home, but all those interested in the mentioned technical fields will greet the new way of understanding Russian professional literature.

The combined series of letters of instruction has been published in two books.

Order-Number 10,029 I

PETZSCHNER

#### Russische Sprache Russian Language

Textbook and Vocabulary, price 10,- DM

Order-Number 10,029 II

#### Russische Sprache Russian Language

Key, price 3,- DM

Order-Number 10,030 / 1-8

Adapted by PETZSCHNER, BRILZ, BUTTKE, DITTMANN, KOSCHINSKY and SCHUTZ

#### Russische Fachtexte Russian Technical Texts

consisting of a booklet each for mining, metallurgy, geology, dressing, ceramic metallurgy, mineralogy, surveying of mines, geophysics.

Languages

лонетруйрованный на базе врубовой манийны мь органом в виде кольцевого бара (рис. 8; 1), режущелиной штангой с режущими дисками (3). Образующийся

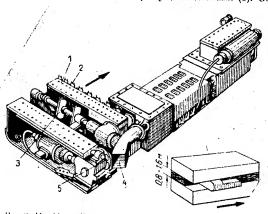


Рис. 8. Комбайн "Донбасс"

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These technical texts have been taken from the original Russian literature and supplied with the necessary technical vocabulary. They well round off the series of letters of instruction "Russian", respectively the "Textbook of the Russian Language", for they give the student the possibility of making use of Russian original texts in his special branch.

#### THE ENGLISH LANGUAGE

DR. BACHMANN

Order-Number 10,073 / 1

#### Englisch / Grundlehrgang A Short Fundamental Course, Part I

Two parts; the first part has come out; price 3,50 DM

The aim of this little book is to give the elements of English grammar as concisely as possible. The booklet is written for academic courses of lectures and tries to enable students and other grown-up persons to learn English in a rather short time. Enlarging the common vocabulary by technical words it leads to the reading of technical literature. Two reports about Freiberg and its Mining

Languages

Academy are given in the appendix as a transition to these technical texts. A summary of mathematical expressions (in English and German) filling a noticeable gap ends off this letter of instruction.

Order-Number 10,074 / 1

DITTMANN

#### Englische Fachtexte - Eisenhüttenkunde English Technical Texts - Ferrous Metallurgy

(price 3,-' DM)

This collection of 24 texts, which are chiefly taken from the newest English and American technical reviews, gives the student and the metallurgical engineer for iron and steel a fundamental and general vocabulary for thoroughly studying articles of ferrous metallurgy written in English. Questions and translation exercises that are closely connected with the contents of the text serve to increase the knowledge of technical terms and of grammar.

The two vocabularies contain nearly all the words occurring in the technical texts so that the reader can do without any voluminous dictionary.

#### THE TECHNIQUE OF MENTAL WORK

Order-Number 10,086 / 1

DR. RIECHERT

#### Schreiben, Lehren und Verstehen Writing - Teaching - Understanding

This first volume will appear in December 1958 (price 9,80 DM)

The book, based on exact investigations of facts and on the analysis of a great many letters of instruction, develops the principles of instructively writing with the intention of giving the authors of such letters of instruction hints as to a very successful redaction of this new means of teaching. This treatise is a part of the «Economy of Lecturing» announced before.

Order-Number 10,019 / 1

DR. RIECHERT

#### Klug leben - besser lernen Live wisely - learn better

describes, in plain and clear words, in the chapters: character, hygienics, environment, attention, memory, examination, the most important preconditions of a successful study. The booklet gives valuable practical instructions.

The Technique of Mental Work

Order-Number 10,019 / 2

DR. RIECHERT

#### Gut ordnen - schneller finden Well arranged - quicker to find

represents in an easily understood manner the technical resources of the mental worker. The chapters about the right way of reading, about the right way of listening, about the references, conspectuses, scientific card-registers, the decimal classification, and the arrangement of the work-room, the study, are drawn altogether from practical life.

Order-Number 10,019 / 3

DR. RIECHERT

#### Scharf denken - klarer schreiben Keen thinking - clearer writing

gives all those, who are preparing a literary, particulary a scientific work (for a diploma or dissertation), a practical help and techniques of work. It outlines frequent errors and defects, explains through examples the construction, the forms of structure, and the techniques of structure, and gives practical hints at the introduction, transition, and conclusion.

The booklet, written clearly and intelligibly, is a guide for every intellectual worker.

The «Economy of Studying» has been published in one book.

Order-Number 10,019

DR. RIECHERT

#### Okonomie des Studierens The Economy of Studying

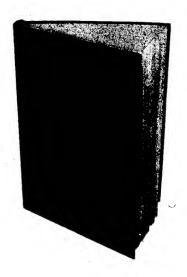
 $6^{\text{th}}$  revised and enlarged edition, 223 pages, 22 illustrations; price in artificial leather 5,40 DM

For the series "Technique of Mental Work" the author gave a revised edition in one volume of the 3 letters of instruction, mentioned above. This book is an excellent help for all intellectual workers and a practical guide to pupils and students as well as to teachers and university lecturers. Here the intellectual worker is addressed by the experienced psychologist and the educationalist. In a captivating way he deals with the problem how the mental worker, though saving his forces, can obtain the highest possible degree of efficiency. In the first part the author examines the environment of the student. In the second part he gives in a

The Technique of Mental Work

The Technique of Mental Work

clear survey a summary of the essential technical resources of scientific work. In the third part, finally, he gives good advice about drawing up, arranging, and wording the work for a diploma or an examination.



The following series of letters of instruction are in preparation:

Gas Application Technique

Colloid Chemistry

Electro-Chemistry

Science of Mining-Machinery

Technology of Binding Agents

Machine Elements

Compensation of Calculations

Fundamentals of Flow Mechanics

Organic-Chemical Preparatory Practice

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